

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/851,970

REMARKS

Claims 1-19 are all the claims pending in the application.

The drawings filed on May 10, 2001 have been accepted by the Examiner. However, Formal Drawings were filed on November 9, 2001. Applicants respectfully request the Examiner to clarify this issue in the next Office action.

Claim 1 is objected to because of informalities. Applicants amend the claims to remove any ambiguities.

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending application no. 09/898,060.

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending application no. 09/833,941.

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending application no. 09/878,268.

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of copending application no. 10/225,532.

Claims 1-8 and 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda et al. (6,340,999).

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Claims 9-11 and 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda (6,340,999) in view of Yano et al. (JP 11-326903).

Claims 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuda (6,340,999) in view of Nemoto et al. (6,456,344).

Analysis

Claim 1 is the only claim in independent form; therefore, the following discussion is directed to this independent claim.

Claim 1 is directed to a reflection type liquid-crystal display device that includes a reflection type liquid-crystal display panel. The panel has a liquid-crystal cell and a reflector. The liquid-crystal cell has a visual-side substrate, a back-side substrate and a liquid crystal held between the visual-side and back-side substrates.

With the structure of the present invention, the thickness and weight of the display device is reduced as compared to the prior art.

Turning to the prior art rejection based on Masuda, the Examiner argues that the optical path changing slopes are inclined 35-48°, “as graphically illustrated by the light path arrow in the upper portion of Figure 10”.

However, the drawing figures are not dispositive of the specific angles. Proportions of features in a drawing are not evidence of actual proportions when drawings are not scale. When a reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. MPEP § 2125.

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The written description of Masuda does not indicate that the drawings are to scale, and is silent with regard to the inclination angle of the slopes. Thus, reliance on the actual drawing (Fig. 10) is not sufficient for showing that Masuda discloses a repetitive structure of optical path changing slopes being inclined at an angle range of 35-48°.

In addition, Applicants note that an LCD device, according to the present invention, has the three requirements of (a) light transmission in the inside of a visual-side substrate of the liquid-crystal cell, (b) a repetitive structure of the optical path-changing slopes, and (c) a low-refractive index transparent layer formed on the transparent substrate of the visual-side substrate.

Masuda discloses a light guide which should be disposed separately on the outer side of the liquid-crystal display panel. A low refractive resin layer 10a is disposed between the light guide 3 and the polarization selecting section 4 as shown in Fig. 10.

In contrast, according to the present invention, a low-refractive index transparent layer is disposed within a LCD panel (within the visual side substrate) and light is transmitted within the panel as shown in Fig. 1 in the present application. Masuda fails to teach or suggest this concept, and thus one would not have been motivated to arrive at the structure of the present invention. Similarly, Yano merely discloses a light guide-plate 1 in which light is transmitted, and there is no teaching or suggestion to impart the light transmission function to the substrate in the LCD panel.

In view of the foregoing, none of the cited references, whether taken alone or in combination, would motivate one of ordinary skill in the art to arrive at the present invention according to claim 1.

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Next, turning to the provisional double-patenting rejections of claim 1, since the rejections are provisional, i.e., between pending applications, Applicants defer comments until one or more of the applications issues into a patent and such rejections are no longer provisional.

The remaining rejections are directed to the dependent claims. These claims are patentable for at least the same reasons as claim 1, by virtue of their dependency therefrom. Moreover, these claims are patentable by virtue of their recitations contained therein.

For example, claim 2 recites that the low-refractive-index transparent layer is disposed between the transparent substrate and the transparent electrode. Masuda fails to teach or suggest this structure, for similar reasons to those discussed above regarding claim 1; namely, Masuda discloses that the low-refractive resin layer is disposed between the light guide, which is on the outer side of the LCD panel, and the polarization selecting section. Thus, claim 2 is patentable for these additional reasons.

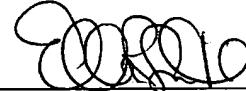
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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